LAKE WINNIBIGOSHISH RESERVOIR DAM
Mississippi River Headwaters Reservoirs
Deer River Vicinity
Itasca County
Minnesota

HAER No. MN-65

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD
National Park Service
Rocky Mountain Regional Office
Department of the Interior
P.O. Box 25287
Denver, Colorado 80225

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I. Introduction

Location: Lake Winnibigoshish, Deer River vicinity, Itasca County, Minnesota

Quad: Little Winnibigoshish Lake Quadrangle

UTM: N5253240, E420700

Date of Construction: 1881-1883, Reconstructed 1899

Present Owner: St. Paul District, U.S. Army Corps of Engineers

Present Use: Flood Control, Recreation, Natural Resources Management

Significance: The Lake Winnibigoshish Reservoir Dam is one of six Mississippi River Headwaters Reservoir dam sites that are historically significant for their association with navigation, commerce, tourism, the Ojibway Indians, and U.S. Indian policy in Minnesota in the late 19th century.

By providing a consistent flow of water throughout the navigation season, the Winnibigoshish Dam enhanced navigation and aided in the commercial development of the Upper Mississippi River. The dam site was also one of the earliest non-Indian settlements in the region and by the late 19th century was attracting some of the first tourists to the area. The dam had a devastating impact on the Ojibway Indians who lived along the lake's shores. The project precipitated a century-long conflict between the tribe and the U.S. government over the damages resulting from the inundation of tribal lands and property.

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St. Paul District
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II. HISTORY

The Lake Winnibigoshish Dam is located on the Mississippi River at the outlet of the Lake Winnibigoshish in southwestern Itasca County, Minnesota.[1] The Winnibigoshish reservoir is the largest in the Mississippi River Headwaters Reservoirs system (HAER No. MN-64) and controls the drainage from a 1,442 square mile area containing 28 lakes. The dam is 408 river miles above St. Paul, Minnesota.[2] The Lake Winnibigoshish Dam site, like the other Headwaters dam sites, originally included the dam and a related complex of buildings. Today, only the dam remains at the site.

The Corps of Engineers began building the dam in 1881 and completed it in 1884. Labor and material shortages, the lack of roads, extreme weather conditions, and controversy with the Ojibway Indians living in the vicinity caused delays for the project. The Corps hired both skilled and unskilled labor to construct the dam. Many of the laborers were Ojibway Indians. The Corps had to transport other laborers through the wilderness to the project site.

The original Winnibigoshish Dam included 20 five-foot sluices and one six-foot log sluice. Timber gates, operated by hoisting machinery, controlled the sluices. The Corps replaced the original structure with a concrete dam containing Saylor's Portland Cement between 1899 and 1900. This concrete dam

remains today. The present dam consists of an 800-foot earthen dike with a timber diaphragm core filled with puddled clay. It is capped with sod and protected by stone rip rap and a concrete slab. The control structure is constructed of reinforced concrete abutments and piers footed with timber piles set in clay. The total length between abutments is 162 feet. Fourteen-foot sluiceways are divided into three sections with stop logs. The Corps added a 12-foot log sluice and a five-foot fishway between 1912 and 1914, which are no longer in use.

In 1931, the Corps removed the steel Tainter gates, wooden reversed Parker beartrap gate, and the operating machinery. Stop logs replaced these features. In 1966, the Corps fitted the stop logs in the five 14-foot sluiceways with slide gates and the replaced the timber spillway apron with concrete. The control structure supports a 20-foot wide timber-decked bridge, which was constructed in 1934. The Corps built the first bridge over the Winnibigoshish Dam in 1909.

In addition to the dam, the Corps built many related structures at the dam site to accommodate the dam tender, his family and the other personnel living at the dam site. During the first dam construction, the Corps erected 17 buildings across the channel to the west of the dam. Most were log buildings with tar paper roofs, except for the dam tender's office, which was built of rough boards. Most of these log structures were

demolished between the time the original dam was built and its reconstruction in 1899. During the concrete reconstruction, the Corps also erected new related structures at the site. These new buildings included a dam tender's house, an office, two shops, an ice house, a root house, and several barns and haysheds. No visible evidence of these related structures remains at the dam site.[3]

The Winnibigoshish Dam was the first Mississippi Headwaters Dam built and it served as the test project for the subsequent dams in the system. In 1882, the Corps of Engineers noted that the "Winnibigoshish Dam is the inauguration of the reservoir system for the entire country." For the dam's construction, the Corps brought most of the tools and supplies to the site via more than 100 miles of Corps-built roads. The difficulty of attracting and transporting labor from the settled part of the state led the Corps to hire large numbers of Ojibway to work on the project. The Corps also purchased additional supplies, provisions, and hay from the tribe.

Nearly two million feet of white and Norway pine were cut from the shores of the lake for construction. Winnibigoshish Dam was the most expensive of all the Headwaters dams, costing $214,000. The sawmill and machinery used there were later shipped to other dam sites, which helped control the costs of the later dams.

Historical Significance of the Winnibigoshish Dam Site

As part of the Headwaters dams system, Winnibigoshish is historically significant for its contribution to the enhancement of navigation on the Upper Mississippi River and its impact on regional commerce. In the late 19th and early 20th centuries, sluicing logs through the dam was an important part of the Winnibigoshish damtender's job. Dam tender's records reveal that logs were sluiced as often as twice a day. The Winnibigoshish dam tender also worked with loggers to facilitate log drives by releasing water from the dam at opportune times. Farther downstream, the dams provided a more consistent flow of the river over St. Anthony Falls, thus benefitting the milling and water power interests in Minneapolis.[4]

The Winnibigoshish dam site complex was also one of the earliest permanent non-Indian settlement in the Mississippi Headwaters region. A Corps map from 1883 shows that the only other permanent residents in the vicinity of Lake Winnibigoshish were the Ojibway Indians and a trader named Fairbanks. The trader's cabin was located between the original dam site's complex of buildings and the Ojibway village on the shores of the lake. The closest town to the dam site until the late 1890s was Grand Rapids, Minnesota, located about 30 miles southeast. The Corps built the first roads and the first telegraph and telephone lines in the region. Lake Winnibigoshish, being the most

northerly of the six dam sites, remained isolated for the longest period of time.[5]

The Lake Winnibigoshish Dam Site was also one of the earliest tourist attractions in the Mississippi Headwaters region. Fishermen and campers first started visiting the dam in the 1910s. During the 1920s, tourism burgeoned at the dam site. In 1924, the damtender estimated that on one Sunday in June 500 visitors had come to see the dam. Many of these visitors were camping in the vicinity of the dam site and relied on the Corps' well for drinking water.[6]

In the 1920s, Northland Camps, Inc., established a tourist camp on Corps land next to the dam site that included 19 cabins, a large hotel, and a general store. The company advertised the camp as "the best camp near a dam site." Fishing at the Winnibigoshish dam was a popular attraction. The Corps added a fishway to the structure between 1912 and 1914 to encourage the passage of fish through the dam.[7]

The Winnibigoshish Dam had a profound effect on the lives of the Ojibway Indians who lived on the shores of the lake. The Corps constructed the dam on Ojibway land without the consent of the tribe. Although the Corps employed many Ojibway laborers to construct the dam, the benefits to the Winnibigoshish band was brief. The construction of the dam had a detrimental impact on the band by raising the lake's level by fourteen feet. The high

water obliterated the band's village, gardens, and traditional burial grounds. The 1883 commission estimated that 3,480 acres of the land used by the Winnibigoshish band were flooded. However, the Corps itself estimated that the amount of inundated land was much higher, a total of 23,240 acres.[8]

The Corps also took great quantities of natural resources, including white pine and rock, from the Ojibway for the Winnibigoshish Dam. In addition, the rise in the lake level deepened the band's shallow fishing grounds, making it impossible for the Ojibway to fish using nets, as was their custom. The netted fish supplied a significant portion of the band's food supply. Hay, which grew along the lakeshore, was also lost, as were many cranberry marshes and some maple trees.

The band may or may not have lost the use of wild rice marshes on the lake. The second commission claimed the Winnibigoshish band had gone to another lake traditionally to harvest rice.[9] However, in 1889, the Rice Commission determined that the damage to the band's wild rice marshes had been extensive. The Ojibway also told the Rice Commission that the high water had completely washed away the bones of their ancestors and scattered them on the lakeshore. Although the government's first commission had promised to move the cemetary and gardens to higher ground, it never did. The high water at Winnibigoshish also erased the band's pathways along and

leading to the lakeshore. Sho-kah-ge-shig, a spokesman for the Winnibigoshish Ojibway, described the devastation and its effect on the band, claiming, "there are no persons who have been so badly damaged. Look around here. It is not fire that makes it look so barren around the lake. It is the effect of the water caused by the overflow."[10]

In the early 1880s, there were between 150 and 170 Ojibway living at Lake Winnibigoshish. The lake had been the site of a permanent village since at least the early 1800s. In his trips of 1832 and 1847, the explorer Schoolcraft noted that there existed a significant Ojibway village at the lake. During the 1830s, Protestant missionaries established a mission at the Winnibigoshish village and the American Fur Company had a trading post there as well. Even as early as the late 18th century, the Northwest Fur Company had run a trading post at Lake Winnibigoshish.[11]

1. The Winnibigoshish Dam was listed on the National Register of Historic Places in 1981.

2. Carole Zellie, "Upper Mississippi Headwaters Reservoirs Damsites Cultural Resources Investigation," Report Prepared for the St. Paul District, Corps of Engineers, 1988, pp. 40-48.

3. The Winnibigoshish Dam Tender's House was documented to HABS standards before its demolition in the late 1980s; Zellie, pp.40-48.

4. See Mississippi River Headwaters Reservoirs, HAER No. MN-64.

5. See Mississippi River Headwaters Reservoirs, HAER No. MN-64.

6. Winnibigoshish Correpondence Books, St. Paul District Archives.

7. Winnibigoshish Damtender's Correspondence Books, St. Paul District Archives; Grand Rapids Herald Review, Volume xxxiii, No.7, 1922, p.18; Zellie, p.40.

8. See Historic Overview Section; Letter of Captain Allen to the Second Commission, 48 Congress, 1st Session, House Executive Document No.76, pp.23-24.

9. 48 Congress, 1st Session, House of Representatives Document #247, pp.4, 21, 154.

10. 51 Congress, 1st Session, House of Representatives, Executive Document #247, pp.4,21,154.

11. Elden Johnson, "Cultural Resources Investigation of the Lake Winnibigoshish Damsite," Report for the St. Paul District, Corps of Engineers, 1978.